```
=> e arachidonic acid
E1       285   ARACHIDONATE/BI
E2        83   ARACHIDONIC/BI
E3         0 --> ARACHIDONIC ACID/BI
E4        23   ARACHIDONIN/BI
E5         9   ARACHIDONO/BI
E6         1   ARACHIDONON/BI
E7         1   ARACHIDONONI/BI
E8         1   ARACHIDONONITRI/BI
E9         1   ARACHIDONONITRILE/BI
E10        1   ARACHIDONONYL/BI
E11        1   ARACHIDONONYLLECITHIN/BI
E12       52   ARACHIDONOYL/BI

=> e arachidonic acid/CN
E13        1   ARACHIDONATE-SPECIFIC PHOSPHOLIPASE A2/CN
E14        1   ARACHIDONIC 5-LIPOXYGENASE/CN
E15        1 --> ARACHIDONIC ACID/CN
E16        1   ARACHIDONIC ACID (N,2,2-3H)ETHANOLAMIDE/CN
E17        1   ARACHIDONIC ACID .OMEGA.-1 HYDROXYLASE (MOUSE STRAIN C57BL/6
               J CLONE WQ2J9-7 GENE CYP2J9)/CN
E18        1   ARACHIDONIC ACID .OMEGA.-1-HYDROXYLASE/CN
E19        1   ARACHIDONIC ACID .OMEGA.-HYDROXYLASE/CN
E20        1   ARACHIDONIC ACID 12S-LIPOXYGENASE/CN
E21        1   ARACHIDONIC ACID 15-LIPOXYGENASE/CN
E22        1   ARACHIDONIC ACID 18(R)-HYDROXYLASE/CN
E23        1   ARACHIDONIC ACID 5-LIPOXYGENASE/CN
E24        1   ARACHIDONIC ACID ANHYDRIDE/CN

=> s e15
L1         1 "ARACHIDONIC ACID"/CN

=> d L1

L1  ANSWER 1 OF 1  REGISTRY  COPYRIGHT 2004 ACS on STN
RN  506-32-1  REGISTRY
CN  5,8,11,14-Eicosatetraenoic acid, (5Z,8Z,11Z,14Z)- (9CI)  (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN  5,8,11,14-Eicosatetraenoic acid, (all-Z)- (8CI)
OTHER NAMES:
CN  (all-Z)-5,8,11,14-Eicosatetraenoic acid
CN  5,8,11,14-all-cis-Eicosatetraenoic acid
CN  5-cis,8-cis,11-cis,14-cis-Eicosatetraenoic acid
CN  5Z,8Z,11Z,14Z-Eicosatetraenoic acid
CN  all-cis-5,8,11,14-Eicosatetraenoic acid
CN  arachidonate
CN  Arachidonic acid
CN  cis-.DELTA.5,8,11,14-Eicosatetraenoic acid
FS  STEREOSEARCH
DR  10417-93-3, 929-92-0
MF  C20 H32 O2
CI  COM
LC  STN Files:  ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS,
    BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN,
    CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, CSNB, DDFU, DETHERM*,
    DIOGENES, DRUGU, EMBASE, GMELIN*, HODOC*, IFICDB, IFIPAT, IFIUDB, IPA,
    MEDLINE, MRCK*, NAPRALERT, NIOSHTIC, PROMT, RTECS*, SPECINFO, TOXCENTER,
    USPAT2, USPATFULL, VETU, VTB
```

(*File contains numerically searchable property data)
Other Sources: EINECS**
(**Enter CHEMLIST File for up-to-date regulatory information)

Double bond geometry as shown.

```
=> e decosahexanoic acid/Cn
E25       1   DECORTISAL/CN
E26       1   DECORTISYL/CN
E27       0 --> DECOSAHEXANOIC ACID/CN
E28       1   DECOSE/CN
E29       1   DECOSE, 2,7:6,10-DIANHYDRO-4,5,8,9-TETRADEOXY-3-O-(1-ETHOXYETHYL)-/CN
E30       1   DECOSERPYL/CN
E31       2   DECOSIDE/CN
E32       1   DECOSILK ART/CN
E33       1   DECOSILK BLACK OXIDE/CN
E34       1   DECOSILK DEEP BLACK/CN
E35       1   DECOSILK WHITE NY/CN
E36       1   DECOSILK WHITE NY-A 2/CN

=> e decosahexanoic acid
E37       2   DECORV/BI
E38       9   DECOS/BI
E39       0 --> DECOSAHEXANOIC ACID/BI
E40      72   DECOSE/BI
E41       2   DECOSEPTAN/BI
E42       1   DECOSEPTANOSE/BI
E43       1   DECOSEPTANOSIDE/BI
E44       1   DECOSERP/BI
E45       1   DECOSERPYL/BI
E46       3   DECOSIDE/BI
E47       5   DECOSILK/BI
E48       3   DECOSOFT/BI

=> e docosahexanoic acid
E49       1   DOCOSAHEXANENOATE/BI
E50       2   DOCOSAHEXANOIC/BI
E51       0 --> DOCOSAHEXANOIC ACID/BI
E52       7   DOCOSAHEXAYN/BI
E53      14   DOCOSAHEXAYNE/BI
E54       1   DOCOSAHEXAYNOIC/BI
E55       6   DOCOSAHEXAYNYL/BI
E56       6   DOCOSAHEXAYNYLENE/BI
E57       1   DOCOSAHEXEN/BI
E58       1   DOCOSAHEXENO/BI
E59       1   DOCOSAHEXENOATE/BI
E60       1   DOCOSAHEXENOIC/BI

=> e docosahexanoic acid/cn
E61       1   DOCOSAHEXAENOYL CHLORIDE, (ALL-Z)-/CN
E62       1   DOCOSAHEXAENOYL COA SYNTHETASE/CN
E63       0 --> DOCOSAHEXANOIC ACID/CN
E64       1   DOCOSAISOPROPOXYDECATITANOXANE/CN
E65       1   DOCOSALENE/CN
E66       1   DOCOSALENE, 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,
              20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,
              40-TETRACONTAHYDRO-/CN
E67       1   DOCOSALENE, 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,
```

```
            20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,
            40-TETRACONTAHYDRO-, (E)-/CN
E68         1   DOCOSALENE, 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,
            20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,
            40-TETRACONTAHYDRO-, (Z)-/CN
E69         1   DOCOSAMETHYLCYCLOUNDECASILOXANE/CN
E70         1   DOCOSAMETHYLDECAGERMANE/CN
E71         1   DOCOSAMETHYLDECASILANE/CN
E72         1   DOCOSAMETHYLDECASILOXANE/CN

=> e docosahexaenoic acid
E73        98   DOCOSAHEXAENOATE/BI
E74       742   DOCOSAHEXAENOIC/BI
E75         0 --> DOCOSAHEXAENOIC ACID/BI
E76         1   DOCOSAHEXAENOIN/BI
E77        21   DOCOSAHEXAENOYL/BI
E78         3   DOCOSAHEXAENOYLGLYCER/BI
E79         3   DOCOSAHEXAENOYLGLYCEROL/BI
E80         1   DOCOSAHEXAENOYLLECITHIN/BI
E81         1   DOCOSAHEXAENOYLOKADAIC/BI
E82         2   DOCOSAHEXAENOYLOXY/BI
E83         1   DOCOSAHEXAENOYLPHOSPHA/BI
E84         1   DOCOSAHEXAENOYLPHOSPHATID/BI

=> e docosahexaenoic acid/cn
E85         1   DOCOSAHEXAENE, 1,1',1''-(1,2,3-PROPANETRIYLTRIS(OXY))TRIS-/C
            N
E86         1   DOCOSAHEXAENOATE 1-MONOOXYGENASE/CN
E87         3 --> DOCOSAHEXAENOIC ACID/CN
E88         1   DOCOSAHEXAENOIC ACID ESTER WITH POLYGLYCERIN/CN
E89         1   DOCOSAHEXAENOIC ACID MONOOXYGENASE/CN
E90         1   DOCOSAHEXAENOIC ACID POLYETHYLENE GLYCOL ESTER/CN
E91         1   DOCOSAHEXAENOIC ACID, (((2,3-DIHYDROXYPROPOXY)HYDROXYPHOSPHI
            NYL)OXY)((1-OXOHEXADECYL)OXY)PROPYL ESTER/CN
E92         1   DOCOSAHEXAENOIC ACID, (1R)-1-((((2-AMINOETHOXY)HYDROXYPHOSPH
            INYL)OXY)METHYL)-1,2-ETHANEDIYL ESTER/CN
E93         1   DOCOSAHEXAENOIC ACID, (1R)-1-((((2-AMINOETHOXY)HYDROXYPHOSPH
            INYL)OXY)METHYL)-2-(((9Z)-1-OXO-9-OCTADECENYL)OXY)ETHYL ESTE
            R, (Z,Z,Z,Z,Z,Z)-/CN
E94         1   DOCOSAHEXAENOIC ACID, (1R)-1-((((2-AMINOETHOXY)HYDROXYPHOSPH
            INYL)OXY)METHYL)-2-((1-OXOHEXADECYL)OXY)ETHYL ESTER, (Z,Z,Z,
            Z,Z,Z)-/CN
E95         1   DOCOSAHEXAENOIC ACID, (1R)-1-((((2-AMINOETHOXY)HYDROXYPHOSPH
            INYL)OXY)METHYL)-2-((1-OXOHEXADECYL)OXY)ETHYL ESTER, DILITHI
            UM SALT/CN
E96         1   DOCOSAHEXAENOIC ACID, (1R)-1-((((2-AMINOETHOXY)HYDROXYPHOSPH
            INYL)OXY)METHYL)-2-((1-OXOOCTADECYL)OXY)ETHYL ESTER, (Z,Z,Z,
            Z,Z,Z)-/CN

=> s e87
L2          3 "DOCOSAHEXAENOIC ACID"/CN

=> d l2

L2  ANSWER 1 OF 3  REGISTRY  COPYRIGHT 2004 ACS on STN
RN  32839-18-2  REGISTRY
CN  Docosahexaenoic acid, (Z,Z,Z,Z,Z,Z)- (9CI)  (CA INDEX NAME)
OTHER CA INDEX NAMES:
```

CN Docosahexaenoic acid, (all-Z)- (8CI)
OTHER NAMES:
CN cis-Docosahexaenoic acid
CN Docosahexaenoic acid
DR 179092-16-1
MF C22 H32 O2
CI IDS, COM
LC STN Files: ADISNEWS, AGRICOLA, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CAPLUS, CASREACT, CEN, CIN, EMBASE, PROMT, TOXCENTER, USPAT2, USPATFULL
CM 1
CRN 112-85-6
CMF C22 H44 O2
1436 REFERENCES IN FILE CA (1907 TO DATE)
35 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
1436 REFERENCES IN FILE CAPLUS (1907 TO DATE)

INDEX 'ADISCTI, ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, AQUASCI, BIOBUSINESS, BIOCOMMERCE, BIOSIS, BIOTECHABS, BIOTECHDS, BIOTECHNO, CABA, CANCERLIT, CAPLUS, CEABA-VTB, CEN, CIN, CONFSCI, CROPB, CROPU, DISSABS, DDFB, DDFU, DGENE, DRUGB, DRUGMONOG2, ...' ENTERED AT 14:49:27 ON 30 JAN 2004
=> (L1 AND L2) AND (PARTICLE OR MATTER OR FORMULA? OR COMPOSITION OR MATTER OR MIXTURE)
0* FILE ADISCTI
2 FILE ADISNEWS
150 FILE AGRICOLA
7 FILE ANABSTR
0* FILE AQUASCI
31 FILE BIOBUSINESS
0* FILE BIOCOMMERCE
485 FILE BIOSIS
50 FILE BIOTECHNO
0* FILE CABA
0* FILE CAPLUS
0* FILE CEABA-VTB
1 FILE CEN
14 FILE CIN
0* FILE CONFSCI
19 FILES SEARCHED...
0* FILE CROPB
0* FILE CROPU
0* FILE DISSABS
0* FILE DDFB
0* FILE DDFU
0* FILE DGENE
0* FILE DRUGB
0* FILE DRUGU
29 FILES SEARCHED...
0* FILE EMBAL
0* FILE ESBIOBASE
0* FILE FEDRIP
0* FILE FOMAD
0* FILE FOREGE
0* FILE FROSTI
0* FILE GENBANK
0* FILE HEALSAFE
0* FILE IFIPAT
0* FILE KOSMET
0* FILE LIFESCI

0* FILE MEDICONF
0* FILE NTIS
0* FILE NUTRACEUT
50 FILES SEARCHED...
0* FILE OCEAN
0* FILE PASCAL
0* FILE PCTGEN
0* FILE PHARMAML
0* FILE PHIC
0* FILE PHIN
13 FILE PROMT
0* FILE RDISCLOSURE
0* FILE SCISEARCH
56 FILE TOXCENTER
0* FILE USPATFULL
63 FILES SEARCHED...
0* FILE USPAT2
0* FILE VETB
0* FILE VETU
67 FILES SEARCHED...

L3 QUE (L1 AND L2) AND (PARTICLE OR MATTER OR FORMULA? OR COMPOSITION OR MATT ER OR MIXTURE) 10 FILES HAVE ONE OR MORE ANSWERS

L4 QUE MICROORGANISM OR FUNG? OR BCTERIA OR DINOFLAGELLATE OR ALGAE OR MORTIE RELLA OR CRYPTHECODINIUM 68 FILES HAVE ONE OR MORE ANSWERS
L5 QUE (PHOSPHOLIPID) AND (L1 AND L2) 7 FILES HAVE ONE OR MORE ANSWERS
L6 QUE (L1 AND L2) AND L4 8 FILES HAVE ONE OR MORE ANSWERS
L7 QUE L5 AND L6 4 FILES HAVE ONE OR MORE ANSWERS
L8 QUE L3 AND L7 , 1 FILES HAVE ONE OR MORE ANSWERS
=> D RANK
F1 5 BIOSIS
L9 5 L3 AND L7
L10 5 DUP REM L9 (0 DUPLICATES REMOVED)
L10 ANSWER 1 OF 5 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AB Objective: To review briefly the influence of dietary long-chain polyunsaturated fatty acids (LC-PUFA) on tissue composition and functionality in early infancy. Moreover, the influences of LC-PUFA sources on plasma composition as well as the effects of these fatty acids on intestinal repair after malnutrition are discussed. Results: Human milk not only supplies essential fatty acids but also contains up to 2% of the total fatty acids as LC-PUFA, of which arachidonic acid (AA) and docosahexaenoic acid (DHA) are considered the most important. Plasma and erythrocyte levels of both AA and DHA are decreased in infants fed artificial standard milk formulae. However, the supplementation of formulae with these fatty acids in amounts close to that of human milk leads to tissue LC-PUFA patterns similar to those of breastsfed infants. However, the bioavailability of LC-PUFA depends on the typical LC-PUFA source; egg phospholipids increases both AA and DHA in plasma phospholipids and HDL more than a mixture of tuna and fungal triglycerides. Conclusions: Dietary LC-PUFA affects positively the growth and development of the infant and ameliorates the visual and cognitive functions, particularly in preterm infants. Likewise, LC-PUFA improves intestinal repair in severe protein-energy malnutrition; therefore, its qualitative and quantitative dietary supply should be considered.
AN 2003:540636 BIOSIS
DN PREV200300543231

TI Role of long-chain polyunsaturated fatty acids in infant nutrition.
AU Gil, A. [Reprint Author]; Ramirez, M.; Gil, M.
CS Department of Biochemistry and Molecular Biology, School of Pharmacy, University of Granada, Campus Universitario de Cartuja, 18071, Granada, Spain
agil@ugr.es
SO European Journal of Clinical Nutrition, (September 2003) Vol. 57, No. Supplement 1, pp. S31-S34. print.
CODEN: EJCNEQ. ISSN: 0954-3007.
DT Article
General Review; (Literature Review)
LA English
ED Entered STN: 19 Nov 2003
Last Updated on STN: 19 Nov 2003

L10 ANSWER 2 OF 5 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AB Addition of arachidonic acid (AA) and docosahexaenoic acid (DHA) to infant formula promotes visual and neural development. This study was designed to determine whether the source of dietary long-chain polyunsaturated fatty acids (LCPUFA) affected overall animal health and safety. Piglets consumed ad libitum from 1 to 16 d of age a skim milk-based formula with different fat sources added to provide 50% of the metabolizable energy. Treatment groups were as follows: control (CNTL; no added LCPUFA), egg phospholipid (PL), algal/fungal triglyceride (TG) oils, TG plus PL (soy lecithin source) added to match phospholipid treatment (TG + PL) and essential fatty acid deficient (EFAD). Formulas with LCPUFA provided 0.6 and 0.3 g/100 g total fatty acids as AA and DHA, respectively. CNTL piglets had 40% longer ileal villi than PL piglets ($P < 0.03$), but the TG group was not different from the CNTL group. Gross liver histology did not differ among any of the formula-fed groups ($P > 0.1$). Apparent dry matter digestibility was 10% greater in CNTL, TG and TG + PL groups compared with PL piglets ($P < 0.002$). No differences in alanine aminotransferase were detected among treatments, but aspartate aminotransferase was elevated ($P < 0.03$) in PL piglets compared with TG + PL piglets. Total plasma AA concentration was greater in the TG group compared with CNTL piglets ($P < 0.05$). Total plasma DHA concentrations were greater in TG piglets compared with PL ($P < 0.06$) or CNTL ($P < 0.02$) piglets. These data demonstrate that the algal/fungal TG sources of DHA and AA may be a more appropriate supplement for infant formulas than the egg PL source based on piglet plasma fatty acid profiles and apparent dry matter digestibilities.
AN 2002:588302 BIOSIS
DN PREV200200588302
TI Comparison of triglycerides and phospholipids as supplemental sources of dietary long-chain polyunsaturated fatty acids in piglets.
AU Mathews, Susan A.; Oliver, William T.; Phillips, Oulayvanh T.; Odle, Jack; Diersen-Schade, Deborah A.; Harrell, Robert J. [Reprint author]
CS North Carolina State University, Raleigh, NC, 27695, USA
bob_harrell@ncsu.edu
SO Journal of Nutrition, (October, 2002) Vol. 132, No. 10, pp. 3081-3089. print.
CODEN: JONUAI. ISSN: 0022-3166.
DT Article
LA English
ED Entered STN: 13 Nov 2002
Last Updated on STN: 13 Nov 2002

L10 ANSWER 3 OF 5 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 2000:446603 BIOSIS
DN PREV200000446603
TI Dietary long-chain polyunsaturated fatty acids in the form of phospholipids or triglycerides influence plasma lipoproteins composition.
AU Amate, L.; Gil, A. [Reprint author]; Ramirez, M.
CS Biochemistry and Molecular Biology Dpt, University of Granada, Granada, Spain
SO Clinical Nutrition (Edinburgh), (August, 2000) Vol. 19, No. Supplement 1, pp. 18. print.
Meeting Info.: 22nd Congress of the European Society of Parenteral and Enteral Nutrition. Madrid, Spain. September 09-13, 2000.
CODEN: CLNUDP. ISSN: 0261-5614.
DT Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LA English
ED Entered STN: 18 Oct 2000
Last Updated on STN: 10 Jan 2002

L10 ANSWER 4 OF 5 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AB Critically ill hospital patients were fed enteral formulas containing different fat substrates. Seven patients received formula X, which contained 28 g of structured triglycerides and menhaden oil to provide 7.6 g of medium-chain fatty acids, 2.5 g linoleic acid, 1.3 g eicosapentaenoic acid, and 0.4 g docosahexaenoic acid per 1000 mL of formula. Six patients received formula Y consisting of 36.8 g of medium-chain triglycerides and corn and soy oils providing 14.3 g medium-chain fatty acids and 11.7 g linoleic acid per 1000 mL. Feeding of formula X increased plasma total phospholipid levels of eicosapentaenoic acid on days 7 and 14 and docosahexaenoic acid levels on day 14. Plasma levels of linoleic acid were reduced in formula-X-fed in comparison to formula -Y-fed patients, whereas arachidonic acid was maintained in both groups during feeding. As a result of these changes, the patients receiving formula X had decreased ratios of arachidonic acid:eicosapentaenoic acid in plasma. Formula Y feeding did not alter eicosapentaenoic acid and docosahexaenoic acid levels in the plasma. In the erythrocyte, formula X feeding resulted in a threefold increase in eicosapentaenoic acid from mean baseline levels of 0.4 +- 0.4% to a mean value of 1.2 +- 0.9% at day 7. The formula X feeding decreased linoleic acid levels on days 7 and 14, whereas levels of arachidonic acid and docosahexaenoic acid remained constant. Formula Y feeding did not affect any of the parameters measured for erythrocytes. The ability to alter plasma and erythrocyte levels of n-3 fatty acids and plasma arachidonic acid:eicosapentaenoic acid ratios may have important implications for patients at risk for sepsis.
AN 1993:167617 BIOSIS
DN PREV199395088667
TI Changes in plasma and erythrocyte fatty acids in patients fed enteral formulas containing different fats.
AU Adams, Steve; Yeh, Yu-Yan; Jensen, Gordon L. [Reprint author]
CS Geisinger Med. Center, Danville, PA 17822, USA
SO Journal of Parenteral and Enteral Nutrition, (1993) Vol. 17, No. 1, pp. 30-34.
CODEN: JPENDU. ISSN: 0148-6071.
DT Article
LA English

ED Entered STN: 31 Mar 1993
Last Updated on STN: 1 Apr 1993

L10 ANSWER 5 OF 5 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AB The phospholipid and fatty acid compositions of the host infected erythrocyte plasma membrane (IEPM) have been determined for erythrocytes infected with the human malaria parasite Plasmodium falciparum. IEPM were prepared by selective lysis of the host erythrocyte (but not of the parasite membranes) with 0.1% saponin, followed by differential centrifugation. The purity of the IEPM was determined by measuring the membrane-specific enzyme markers acetylcholinesterase, glutamate dehydrogenase and lactate dehydrogenase, and by immunoelectron microscopy using monoclonal antibodies specific for human erythrocyte glycophorin A (4E7) and for a 195 kDa parasite membrane glycoprotein (Pf6 3B10.1). Both approaches demonstrated that the host erythrocyte plasma

membrane preparation was free from contamination by parasite membranes. During intra-erythrocytic development of the parasite, the phospholipid composition of the erythrocyte membrane was strikingly altered. IEPM contained more phosphatidylcholine (38.7% versus31.7%) and phosphatidylinositol (2.1% versus 0.8%) and less sphingomyelin (14.6% versus 28.0%) than normal uninfected erythrocytes. Similar alterations in phospholipid composition were determined for erythrocyte membranes of parasitized cells isolated by an alternative method utilizing polycationic polyacrylamide microbeads (Affigel 731). The total fatty acid compositions of the major phospholipids in IEPM were determined by g.l.c. The percent of polyunsaturated fatty acids in normal erythrocyte phospholipids (39.4%) was much higher than in phospholipids from purified parasites (23.3%) of IEPM (24.0%). The unsaturation index of hospholipids in IEPM was considerably lower than in uninfected erythrocytes (107.5 versus 161.0) and was very similar to that in purified parasites (107.5 versus 98.5). Large increases in palmitic acid (C16:0) (from 21.88% to 31.21%) and in oleic acid (C18:1) (from 14.64% to 24.60%), and major decreases in arachidonic acid (C20:4) (from 17.36% to 7.85%) and in docosahexaenoic acid (C22:6) (from 4.34% to 1.8%) occurred as a result of infection. The fatty acid profiles of individual phospholipids classes from IEPM resembled in many instances the fatty acid profiles of parasite phospholipids rather than those of uninfected erythrocytes. Analysis of IEPM from P. falciparum-infected erythrocytes (trophozoite stage) revealed that, during intra-erythrocytic maturation of the parasite, the host erythrocyte phospholipid composition was markedly refashioned. These alterations were not dependent on the method used to isolate the IEPM, with similar results obtained using either a saponin-lysis method or binding to Affigel beads. Since mature erythrocytes have negligible lipid synthesis and metabolism, these alterations must occur as a result of parasite-directed metabolism of erythrocyte lipids and/or trafficking of lipids between the parasite and erythrocyte membranes.AN 1991:230569 BIOSIS DN PREV199191122029; BA91:122029TI MODIFICATION OF HOST CELL MEMBRANE LIPID COMPOSITION BY THE INTRA-ERYTHROCYTIC HUMAN MALARIA PARASITE PLASMODIUM-FALCIPARUM.
AU HSIAO L L [Reprint author]; HOWARD R J; AIKAWA M; TARASCHI T F
CS DEP PATHOLOGY CELL BIOL, THOMAS JEFFERSON UNIV, 1020 LOCUST ST, PHILADELPHIA, PA 19107, USA
SO Biochemical Journal, (1991) Vol. 274, No. 1, pp. 121-132.
ISSN: 0264-6021.
DT Article
FS BA
LA ENGLISH
ED Entered STN: 9 May 1991
Last Updated on STN: 16 Jul 1991